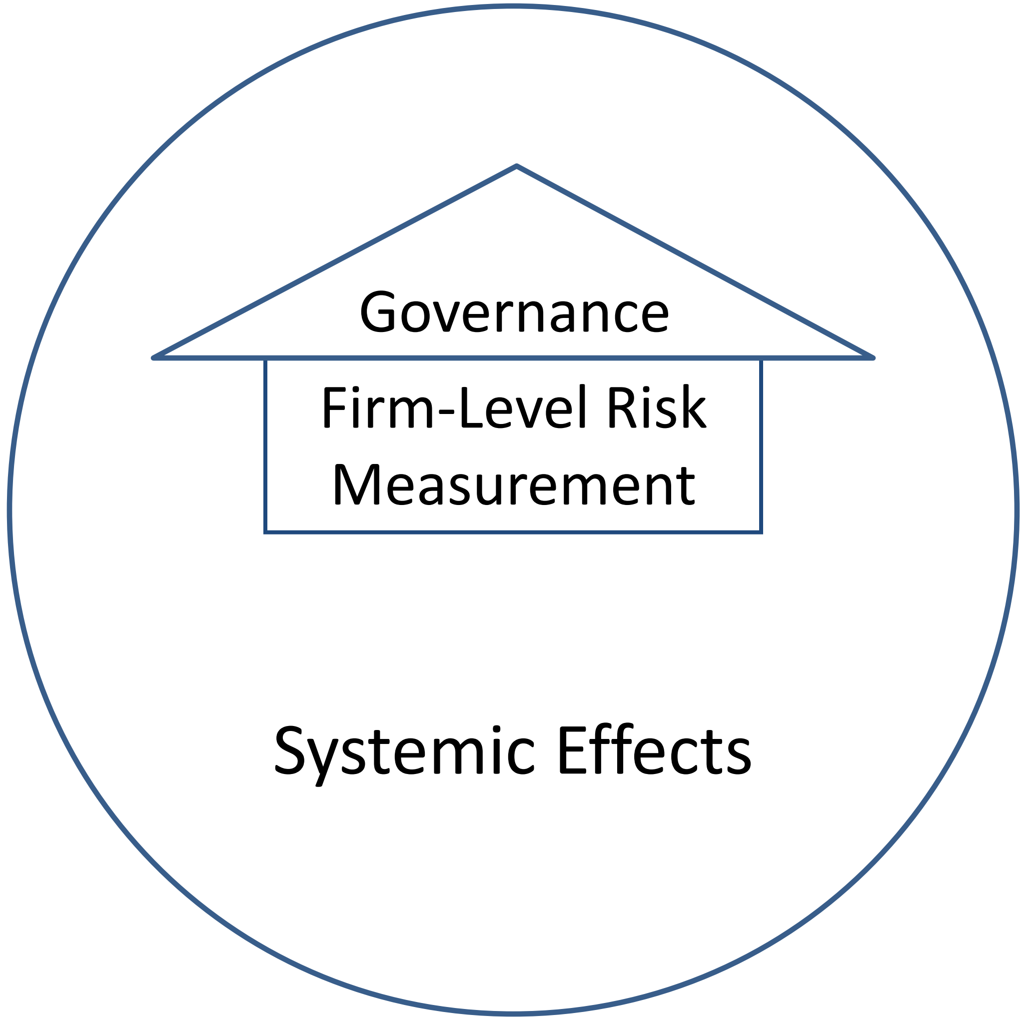
Forging Best Practices in Risk Management

Mark Flannery, Paul Glasserman, David Mordecai, and Cliff Rossi



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- Firm-Level Risk Measurement
  - *Measuring procyclically and managing countercyclically in a world of volatility regimes*
- Risk Governance and Incentives
  - *Structuring governance and risk-adjusted compensation that addresses behavioral biases*
- Systemic Effects
  - *Recognizing contingent obligations and the limits of hedging as sources of systemic risk*

Risk Measurement and Data

- One lesson of the financial crisis is the importance of taking a longer-term view, both in considering historical data and in looking forward

- A key feature of the historical record is the presence of volatility regimes

- Firm-level risk management that fails to anticipate a change of regime becomes a source of risk amplification if many firms respond the same way to elevated volatility

- A macroprudential view of risk management needs to encourage risk measurement that is sensitive to shifts in volatility while creating mechanisms to dampen the amplifying effect of this very sensitivity

Risk Governance and Incentives

- Widespread breakdowns in risk management in the years leading up to the financial crisis are well-documented
- Academic literature on corporate governance and incentives (managerial power hypothesis) provides a partial answer to how management can adopt risky strategies.
- Senior management may be subject to a variety of cognitive biases that when coupled with managerial power can marginalize the effectiveness of risk management
- A number of policy options are available to address risk governance issues including an array of financial incentives to induce management to strengthen risk management, application of risk-adjusted performance metrics, and measures to enhance risk independence and stature.

Systemic Risk as Contingent Obligations

- Financial Intermediation involves system-wide borrowing and lending which is not adequately accounted
  - Hedging activities also involve the use of leverage

- The results of this credit extension and their related settlement mechanics (e.g. margin, clearing, settlement) is an evolving network of (contingent) obligations
  - One-Period Delta-Neutral Pricing does not capture these dynamics

- In essence, these activities are not riskless, but involve a bet on the future that might be best measured in the context of what has been termed in the industry as "Risk-Based Leverage" (i.e. *conditional leverage*)
  - More robust and coherent metrics for quantifying conditional leverage might be the state-dependent sensitivities (i.e. conditional elasticities) of a system of forwards